

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTONTHE IDENTITY OF *DESMOGNATHUS PHOCA*  
(MATTHES) AND OF *DESMOGNATHUS MONTICOLA*  
DUNN.

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The completion of a study on *Desmognathus*, which I had previously mentioned (1944:265), being indefinitely postponed, it has been deemed desirable to present specific (or species group) accounts whenever these could be organized. Of the forms in this genus at least one, it appears to me, requires a nomenclatorial change.

The salamander referred to by the Check List (Stejneger and Barbour, 1943: 15) and by Dr. Bishop's Handbook (1943:206) as *Desmognathus phoca* (Matthes) was actually first described by Dunn (1916: 73) as *Desmognathus monticola* which name was later synonymized by him (1923: 39) with *Salamandra phoca* Matthes at a time when the present distributional data were not available.

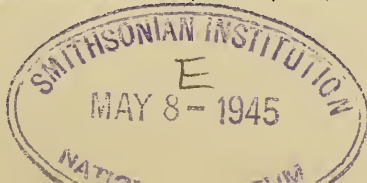
Matthes' type specimen is not known to exist (Dunn, 1926: 73). More recent information is contained in a letter (October 21, 1944) from Dr. Dunn concerning the present point, "When I was in Vienna in 1929, I ran into a Matthes' salamander, an *Ambystoma texanum*, probably one of his two cotypes; but no others."

In the original description of *phoca* (Matthes, 1855: 273) the account of the teeth, "Zähne bestehen aus einer vordern Querreihe und einer Längsgruppe", applies equally well to adult females of both *Desmognathus f. fuscus* and *Desmognathus monticola*, to the majority of the adult *monticola* males, and to a few adult *fuscus* males.

The pattern, as described by Matthes, is duplicated in many individuals of both *monticola* and *fuscus*.

The measurements given in the original description (total length approximately 110 mm.) would fit adults of both *monticola* and *fuscus*.

The remainder of the characters mentioned by Matthes are apparently of generic or more inclusive rank and are consequently applicable to both species mentioned above.



Since the type specimen is not available and the original description is inadequate for a definite allocation of names, the location of the type locality is here a matter of prime importance. Fortunately it was very accurately given by Matthes in these words: "... unter einem kleinen flachen Stein dicht neben dem Taylors-Creeck in Kentucky unweit New-Port." The Miami River flows southward through Hamilton County, Ohio, to empty into the Ohio River. One of the former's westward-flowing tributaries near its mouth is Taylor's Creek. The topographic map of the region shows a settlement, near the juncture of the creek and the river, called Taylor's Creek, which is opposite the town of Miami on the western banks of the Miami River. This area, which is about fourteen miles northwest of Newport, Campbell County, Kentucky, undoubtedly represents the type locality of *phoca*.

Thus, *phoca*'s type locality, represented on the accompanying map by a solid triangle, is more than 100 miles from the nearest *monticola* localities (represented by circles on the map. Solid circles represent specimens examined; hollow circles, literature records.) Ralph Dury and others from the Cincinnati region have collected actively in the general vicinity of the type locality of *phoca* and have been unable to find any specimens they would identify as the form being considered here.

Of the three major physiographic divisions in eastern United States, only certain provinces of the Appalachian Highlands harbor *monticola*. The form is not known from the Atlantic Coastal Plain (cf. below) to the east and south and only questionably from the Interior Plains (cf. below) to the west. The type locality of *phoca*, however, is in the Interior Plains. The dashed line on the accompanying map approximates the division between the Appalachian Highlands and the Interior Plains.

For the following reasons, therefore, it seems best to the present writer to consider *Salamandra phoca* Matthes a synonym of *Desmognathus fuscus fuscus* (Rafinesque) and to regard *Desmognathus monticola* Dunn as the valid name for the salamander currently recognized under the name *Desmognathus phoca* (Matthes):

1. The type specimen is lost.
2. The original description of *phoca* applies equally well to *fuscus* and to *monticola*.
3. In the vicinity of the type locality subsequent collections have revealed *fuscus* to the exclusion of *monticola*.
4. The nearest known *monticola* records are 100 miles to the east of the type locality of *phoca*.
5. The type locality is in a different major physiographic division from that in which *monticola* appears to be restricted.

It may be pertinent, at this point, to discuss two outlying records (represented on the accompanying map by hollow triangles) whose validity requires consideration. Hibbard (1936:279), in writing of *phoca* in Edmonson County, Kentucky, stated, "Common around springs and rocky streams. This species has been confused with *D. f. fuscus* in this area." Dunn had previously (1926:80) listed a specimen (Museum of

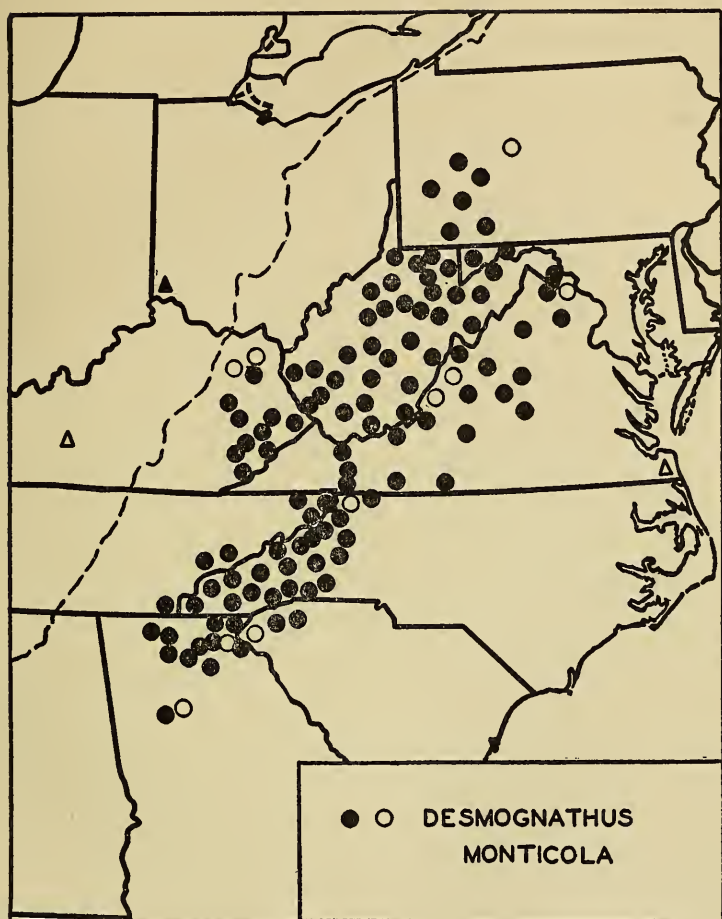
Comparative Zoology No. 2230) from this area, also. The weight of these reports from independent authorities would seem to readily negate any assumption concerning the validity of the records. However the distance between Edmonson County and the records in eastern Kentucky, from which no *monticola* are known, is great. It is desirable to have specimens from the intervening area or, lacking this, to have a reasonable explanation for this unusual distribution before considering our knowledge of the range of this form essentially accurate.

The Atlantic Coastal Plain record of Scharlinski (1939: 57), from Norfolk County, Virginia, requires less comment. Either the material was misidentified or the locality was that of shipment rather than of collection. Without doubt, *monticola* does not occur naturally in Norfolk County, Virginia.

#### ANNOTATED LITERATURE LIST.

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Distribution of *Desmognathus monticola*. Solid circles represent the specimens examined; hollow circles, the records listed in the Annotated Literature List and reports for Bath and Alleghany Counties, Virginia (from a letter by Richard L. Hoffman dated November 9, 1944); hollow triangles, the outlying records discussed in the text; solid triangle, the type locality of *phoca*; and dashed line, the division between the Appalachian Highlands and the Interior Plains Physiographic Divisions.